

BEFORE YOU START

This guide is general information only and does not replace advice from a healthcare professional. Check with your physiotherapist or physician before you begin these exercises, especially if you have current back or leg pain. Stop any exercise that increases your pain or causes numbness, tingling or weakness in your legs. Get medical care right away if you lose control of your bladder or bowels, or notice numbness in your groin or inner thighs.

BACK PAIN PREVENTION: 5 EXERCISES

Lower Back (Disc Injury) Prevention Program



Low back pain is one of the most common health problems in the world. A 2023 Global Burden of Disease analysis estimated that about 619 million people were living with it in 2020, and that number is projected to reach about 843 million by 2050. Back injury prevention programs aim to reduce the risk and severity of injuries.

A disc bulge or herniated disc happens when the soft, gel-like centre of a spinal disc pushes against or through its tough outer layer. Herniated disc pain is often sharp, burning or stinging and can radiate into the buttock and leg. Many disc problems improve with time and appropriate care. However, ongoing pain, or a loss of strength or mobility, needs to be assessed by a health professional.

BIRD DOG

Target muscles:

Erector spinae, multifidus, gluteus maximus

Exercise Instructions

1. Start on your hands and knees in a tabletop position, with your hands under your shoulders and your knees under your hips.
2. Gently brace your abdominal muscles and keep your spine neutral.
3. Extend your right arm forward and your left leg backward, reaching long. Lift your leg to glute height or higher, keeping your lower back still and your hips level.
4. Lower with control, then repeat on the other side.

2 to 3 sets: 10 reps per side, hold 2 to 3 seconds

PLANK

Target muscles:

Transverse abdominis, rectus abdominis, obliques, gluteus maximus

Exercise Instructions

1. Rest on your forearms and toes with your elbows directly under your shoulders.
2. Keep your body in a straight line from head to heels. Do not let your lower back sag.
3. Gently brace your abdominal muscles, squeeze your glutes and breathe normally while you hold.

1 set: 3 to 5 reps, hold 10 to 20 seconds



BACK EXTENSIONS

Target muscles:

Erector spinae, multifidus, gluteus maximus

Exercise Instructions

1. Lie face down on an exercise ball with your hips supported and your feet anchored.
2. Place your hands behind your head or cross your arms over your chest.
3. Gently brace your abdominal muscles, then lift your chest off the ball until your body is in a straight line.
4. Keep your neck in line with your spine. Do not arch past a straight line.
5. Lower with control and repeat.

1 set: up to 10 reps, hold 10 to 15 seconds



CAT-COW

Target muscles:

Erector spinae, multifidus, rectus abdominis

Exercise Instructions

1. Start on your hands and knees in a tabletop position.
2. Inhale, lower your belly toward the floor and lift your chest and tailbone (Cow).
3. Exhale, round your spine toward the ceiling and tuck your chin (Cat).
4. Flow between Cow and Cat with each breath.
5. Keep your movements slow, smooth and controlled, within a comfortable range.

2 to 3 sets: aim for 10 reps



DEAD HANG

Target muscles:

Forearm flexors, latissimus dorsi, abdominal muscles

Exercise Instructions

1. Hang from a pull-up bar with your arms straight and your hands shoulder-width apart.
2. Keep your shoulders gently engaged, not shrugged toward your ears, and your abdominal muscles lightly braced.
3. Breathe slowly and steadily while you hold your grip.
4. Step down with control.

3 sets: ideally hang for 30 seconds. Start with a shorter hang if needed.



RATIONALE BEHIND THESE EXERCISES

Doing these low-impact exercises regularly builds the strength and endurance of the muscles that support the spine, which may reduce stress on the spinal column. They also support spinal mobility. Research suggests that regular exercise can lower the risk of back pain returning, and the benefit lasts only as long as the exercise continues.

ADDITIONAL ACTIVITIES (OPTIONAL)

- Yoga
- Pilates
- Walking
- Swimming
- Stationary cycling